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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/730,786	12/07/2000	Satoshi Mikami	N00230US	8900
21254	7590	05/31/2006		
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			EXAMINER TRAN, DZUNG D	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/730,786

Applicant(s)

MIKAMI, SATOSHI

Examiner

Dzung D. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 14-16, 19-22, 25 and 41-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 14-16, 19-22, 25 and 41-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 14-16, 19-22, 25 and 41-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Stephen US patent no. 6,563,614.

Regarding claim 1, Stephens discloses in Figure 4, an optical communication system comprising:

a front optical transmission line mounted at a front stage (e.g., a fiber that connect to the input of Raman fiber amplifier 36, col. 8, lines 2-3);

a back optical transmission line mounted at a back stage (e.g., a fiber that connect to the output of Raman fiber amplifier 36);

an optical repeater formed between said front optical transmission line and said back optical transmission line, said optical repeater comprising an optical amplifier 20 for amplifying an optical signal input from said front optical transmission line and emitting the amplified optical to said back optical transmission line (see Figure 4); and

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source controller 32 (equivalent to a transmission line compensating device, see col. 7, lines 28-35) to generate control light (e.g. source controller 32 control the optical compensate source 30 for generating a compensating or control channel λ_{ci} , col. 7, lines 28-35) which is input to one of said front and back optical transmission lines (see figure 4) for producing a Raman amplification effect (e.g. Raman amplifier 36 of figure 4, col. 8, lines 2-3) within one of said front and back optical transmission line mounted outside of said optical repeater based on a control signal (e.g. compensating channel λ_{ci}) corresponding to an optical signal level input from said front optical line (e.g., signal level of compensating source 30; col. 7, line 36-41) and

wherein said optical amplifier 20 is disposed between said transmission line compensating device 32 and the other one of said front and back optical transmission line.

Regarding claims 14 and 47, Stephens discloses in Figure 4, an optical repeater for connecting between a front optical transmission line and a back optical transmission line comprising:

an optical amplifier 20 for amplifying an optical signal propagating through said front optical transmission line mounted at a front stage (e.g., a fiber that connect to the input of the optical amplifier 20 that includes Raman fiber amplifier 36, col. 8, lines 2-3) and sending the amplified optical signal to said back optical transmission line mounted at a back stage (e.g., a fiber that connect to the output of the optical amplifier 20 that includes Raman fiber amplifier 36); and

a source controller 32 (equivalent to a transmission line compensating device, see col. 7, lines 28-35) to generate control light (e.g. source controller 32 control the optical compensate source 30 for generating a compensating or control channel λ_{ci} , col. 7, lines 28-35) which is input to one of said front and back optical transmission lines (see figure 4) for producing a Raman amplification effect (e.g. Raman amplifier 36 of figure 4, col. 8, lines 2-3) within one of said front and back optical transmission line mounted outside of said optical repeater based on a control signal (e.g. compensating channel λ_{ci}) corresponding to an optical signal level input from said front optical line (e.g., signal level of compensating source 30; col. 7, line 36-41) and

wherein said optical amplifier 20 is disposed between said transmission line compensating device 32 and the other one of said front and back optical transmission line.

Regarding claim 20, Stephens discloses in Figure 4, the optical system includes a plurality of optical amplifiers 20 for amplifying an optical signal propagating through said front optical transmission line mounted at a front stage (e.g., a fiber that connect to the input of the optical amplifier 20 that includes Raman fiber amplifier 36, col. 8, lines 2-3) and sending the amplified optical signal to said back optical transmission line mounted at a back stage (e.g., a fiber that connect to the output of the optical amplifier 20 that includes Raman fiber amplifier 36) and

a plurality of source controller 32 (equivalent to a transmission line compensating device, see col. 7, lines 28-35) to generate control light (e.g. source controller 32 control the optical compensate source 30 for generating a compensating or control channel λ_{ci} ,

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col. 7, lines 28-35) which is input to one of said front and back optical transmission lines (see figure 4) for producing a Raman amplification effect (e.g. Raman amplifier 36 of figure 4, col. 8, lines 2-3) within one of said front and back optical transmission line mounted outside of said optical repeater based on a control signal (e.g. compensating channel λ_{ci}) corresponding to an optical signal level input from said front optical line (e.g., signal level of compensating source 30; col. 7, line 36-41).

Regarding claims 2, 15 and 21, Stephens discloses in figure 2, the transmission line compensating device 32 is so configured as to send said control light to said front optical transmission line mounted outside of said optical repeater 20;

wherein said optical amplifier 20 is disposed between said transmission line compensating device 32 and the other one of said front and back optical transmission line.

Regarding claims 3, 16 and 22, Stephens discloses in figure 4, the transmission line compensating device 32 is so configured as to send said control light (e.g. source controller 32 control the optical compensate source 30 for generating a compensating or control channel λ_{ci} , col. 7, lines 28-35) to said back optical transmission line outside of said optical repeater 20.

Regarding claim 4, Stephens discloses in figure 4, the transmission line compensating device 12 is directly connected to amplifier 36 (e.g. mounted inside said optical repeater 20).

Regarding claim 5, Stephens discloses in figure 4, the transmission line compensating device 32 is separately and individually outside said optical repeater 20.

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Regarding claims 6, 19 and 25, Stephens further discloses the transmission line compensating device 32 includes two or more control light sources 30 (col. 7, lines 66-67) to generate control light having a different wavelength (e.g. compensating channels λ_{ci} , col. 8, line 21) and an optical multiplexer 26_m of figure 5(a) to multiplex said control light fed from said two or more control light sources 30 (see figure 5(a)).

Regarding claims 41-43, Stephens discloses a light receiving circuit 24 for detecting the optical level input from said front optical transmission line (col. 7, lines 63-66) and a control circuit 32 for generating the control light based on the detected optical signal level fed from said light receiving circuit 2 (col. 7, line 66 to col. 8, line 6).

Regarding claim 44, Stephens discloses in figure 4 (e.g., the control group 12 in the upper left hand side of the drawing), control light from the control light sources 30 (col. 7, lines 66-67) is input to said front optical transmission line and said optical amplifier 36 is disposed between the transmission line compensating device 32 and said back optical transmission line.

Regarding claim 45, Stephens discloses in figure 4, optical signal is amplified by said optical amplifier 20 after being compensated by said Raman amplifier 36 of figure 4, col. 8, lines 2-3.

Regarding claim 46, Stephens further discloses in figure 4, optical signal is compensated by said Raman amplifier 36 of figure 4, col. 8, lines 2-3. before being amplified by said optical amplifier 20.

Response to Arguments

3. Applicant's arguments filed on 08/31/2005 have been fully considered but they are not persuasive.

A Rejection of claims 1-6, 14-16, 19-22, 25 and 41-47 under USC § 102(e) as being anticipated by Stephen US patent no. 6,563,614.

Applicant argues that Stephen reference does not disclose or suggest "optical amplifier is disposed between said transmission line compensating device and the other one of said front and back optical transmission line".

However Stephen clearly discloses in Figure 4, optical amplifier (e.g., 20, 36) is disposed between a source controller 32 (equivalent to a transmission line compensating device, see col. 7, lines 28-35) and the other one of said front and back optical transmission line that connect to the optical amplifier (e.g., 20, 36).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dzung Tran
05/25/2006